

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. **(Currently Amended)** A test plug tool for use in testing a pressure integrity of a pressure control stack mounted to a wellhead, including testing the pressure integrity of a joint between a casing and a casing support that secures the casing to a ~~the~~ wellhead stack assembly, the test plug tool providing a high pressure seal with the casing below the joint between the casing and the casing support.
2. **(Original)** The test plug tool as claimed in claim 1 further comprising a test plug hanger and a test plug, the test plug hanger including a hanger flange at a top end thereof and a test plug support leg that depends from the hanger flange and includes a bottom end for supporting the test plug in the casing.
3. **(Currently Amended)** The test plug tool as claimed in claim ~~1~~ 2 further comprising a fluid passage that permits pressurized fluid injected into the wellhead stack assembly to flow through the hanger flange.
4. **(Original)** The test plug tool as claimed in claim 2 wherein the test plug comprises a cup tool.
5. **(Original)** The test plug tool as claimed in claim 4 wherein the cup tool comprises a cup sleeve that terminates in a bullnose for guiding the test plug through the wellhead stack assembly.

6. **(Currently Amended)** The test plug tool as claimed in claim 4 wherein the cup tool comprises an elastomeric cup for sealing against the casing, an annular sealing element compressed against the casing by the elastomeric cup, and a gauge ring to inhibit the sealing element from being extruded into an annulus between ~~the bullnose and the casing~~ and a bullnose that terminates the cup tool.
7. **(Original)** The test plug tool as claimed in claim 2 wherein the test plug leg is hollow to reduce a weight of the test plug tool.
8. **(Original)** The test plug tool as claimed in claim 2 further comprising a landing joint connector located above the hanger flange.
9. **(Original)** The test plug tool as claimed in claim 8 wherein the landing joint connector comprises a socket with a box thread for receiving a pin thread of one of a drill pipe, a production tubing, and a landing joint.
10. **(Original)** The test plug as claimed in claim 2 wherein the hanger flange is received in a top end of a drilling flange and has beveled top corners engaged by locking pins of the drilling flange to lock the test plug tool in the wellhead stack assembly.
11. **(Original)** The test plug tool as claimed in claim 5 wherein the cup sleeve is a hollow cylinder.
12. **(Currently Amended)** The test plug tool as claimed in claim 2 wherein the test plug tool is used to pressure test a joint between a production casing and a production casing mandrel of the wellhead stack assembly, and the test plug hanger

comprises an elongated tubular member having a pin threaded top end for treaded engagement with a flanged adapter for sealing a top of the wellhead stack assembly, and a the hanger flange having has a beveled bottom shoulder received in a bowl-shaped abutment at a bottom of a tubing head spool of the wellhead stack assembly.

13. **(Original)** The test plug tool as claimed in claim 12 wherein the test plug hanger further includes a fluid passage through a sidewall of the test plug hanger, the fluid passage being located below the hanger flange and above a bottom end of the test plug hanger.
14. **(Original)** The test plug tool as claimed in claim 13 wherein the test plug comprises a cup tool.
15. **(Original)** The test plug tool as claimed in claim 14 wherein the cup tool comprises a cup sleeve that terminates in a bullnose for guiding the test plug through the wellhead stack assembly.
16. **(Currently Amended)** The test plug tool as claimed in claim 14 wherein the cup tool comprises an elastomeric cup for sealing against the casing, an annular sealing element compressed against the casing by the elastomeric cup, and a gauge ring to inhibit the sealing element from being extruded into an annulus between ~~the bullnose and~~ the casing and a bullnose that terminates the cup tool.
17. **(Original)** The test plug tool as claimed in claim 2 wherein the test plug hanger comprises:

an axial passageway bored through a central portion of the test plug hanger, the axial passageway permitting pressurized fluid that may have leaked below the test

plug to flow upwardly through the central portion of the test plug hanger; and

a backpressure valve in fluid communication with the axial passageway, the backpressure valve throttling the pressurized fluid flowing upwardly through the test plug hanger.

18. **(Original)** The test plug tool as claimed in claim 17 further comprising a landing tool connected to an upper portion of the test plug hanger, the landing tool defining a central bore through which pressurized fluid can flow upwardly after being throttled through the backpressure valve.
19. **(Original)** The test plug tool as claimed in claim 18 wherein the backpressure valve is threadedly connected to an upper portion of the test plug hanger.
20. **(Original)** The test plug tool as claimed in claim 19 wherein the backpressure valve comprises a spring-loaded ball valve having a spring exerting a downward force on a ball for obstructing an aperture of the backpressure valve.
21. **(Currently Amended)** The test plug tool as claimed in claim 20 wherein the backpressure valve further comprises an annular body having a lower annular shoulder defining ~~the~~ a lower aperture, the lower annular shoulder supporting a gasket against which the ball is forced by the spring.
22. **(Original)** The test plug tool as claimed in claim 21 wherein the test plug hanger has an annular groove for housing a seal for providing a fluid-tight seal between the backpressure valve and the test plug hanger.

23. **(Currently Amended)** A method for testing a pressure integrity of a pressure control stack mounted to a wellhead, comprising:

inserting a test plug into ~~the~~ a wellhead stack assembly and testing the pressure integrity of a joint between a casing and a casing support that secures the casing to the wellhead stack assembly using ~~the~~ a test plug tool, which provides a high pressure seal with the casing below the joint between the casing and the casing support.

24. **(Currently Amended)** The method as claimed in claim 23, further comprising:

inserting the test plug tool using a landing tool;

landing the test plug in the casing beneath the joint between the casing and the casing support;

locking the test plug tool in ~~the~~ a position in which the test plug is beneath the joint between the casing and the casing support;

detaching the landing tool from the test plug tool;

retracting the landing tool from the wellhead stack assembly;

~~pressurizing~~ injecting test fluid to pressurize the wellhead stack assembly to at least an estimated operating pressure; and

inspecting ~~the~~ seals and joints of the wellhead stack assembly, including the joint between the casing and the casing support, to determine whether any test fluid is leaking from the seals and joints ~~have withstood the test pressure~~.

25. **(Currently Amended)** The method as claimed in claim 24 ~~further comprising pressure testing a joint between~~wherein the casing comprises a surface casing and the casing support comprises a wellhead.
26. **(Currently Amended)** The method as claimed in claim 24 ~~further comprising pressure testing a joint between~~an~~wherein the casing comprises an~~ intermediate casing and the casing support comprises an intermediate casing mandrel.
27. **(Currently Amended)** The method as claimed in claim 24 ~~further comprising pressure testing a joint between~~wherein the casing comprises a production casing and the casing support comprises a production casing mandrel.
28. **(Currently Amended)** The method as claimed in claim 24 further comprising: ~~a step of~~
inserting the test plug tool through a blowout preventer mounted to the wellhead stack assembly; and
injecting test fluid to pressure testing~~test~~ the rams of the blowout preventer as well as the wellhead stack assembly.
29. **(Currently Amended)** The method as claimed in claim 24 further comprising ~~steps of~~, subsequent to locking the test plug tool but prior to detaching the landing tool:
pressurizing the wellhead stack assembly; and
~~flowing pressurized fluid that may have leaked below the test plug tool upwardly through an axial passageway in the test plug tool;~~

~~throttling the pressurized fluid through a backpressure valve selectively obstructing the axial passageway; and~~
~~flowing the~~ monitoring a top end of the landing tool for
pressurized fluid flowing upwardly through a
backpressure valve into a central bore of the landing
tool for alerting a user of a leak to determine whether
the pressurized fluid in is leaking past the test plug
tool.

30. (New) A test plug tool for use in testing a pressure integrity of a pressure control stack mounted to a wellhead, including testing the pressure integrity of a joint between a casing and a casing support that secures the casing to a wellhead stack assembly, the test plug tool comprising:

a test plug hanger for suspending the test plug tool in the pressure control stack, the test plug hanger including a fluid passage to permit test fluid to pass therethrough;

a test plug leg connected to an underside of the test plug hanger;

a test plug connected to a bottom end of the test plug leg, the test plug having a sealing element for providing a high-pressure fluid seal with the casing when the test fluid is injected into the wellhead stack assembly.

31. (New) The test plug tool as claimed in claim 30 wherein the test plug hanger comprises a hanger flange that extends laterally from a hanger socket and has a beveled top edge that is locked in place in the wellhead stack assembly by locking pins of the wellhead stack assembly after the test

- plug tool is inserted into the wellhead stack assembly, so that the test plug tool is restrained from upward movement.
32. (New) The test plug tool as claimed in claim 31 wherein the fluid passage comprises a fluid passage through the hanger flange.
33. (New) The test plug tool as claimed in claim 32 further comprising an axial passageway through a central portion of the test plug hanger, the axial passageway permitting pressurized fluid that may have leaked past the test plug to flow upwardly through the axial passageway; and
a backpressure valve in fluid communication with the axial passageway, the backpressure valve throttling the pressurized fluid flowing upwardly through the axial passageway.
34. (New) A test plug tool as claimed in claim 33 wherein the backpressure valve comprises a spring-loaded ball valve having a spring exerting a downward force on a ball for obstructing an aperture of the backpressure valve, and further comprising an annular body having a lower annular shoulder defining a lower aperture, the lower annular shoulder supporting a gasket against which the ball is forced by the spring.
35. (New) The test plug tool as claimed in claim 30 wherein the test plug hanger comprises a hanger flange with beveled shoulders dimensioned to fit within the bore of a tubing head spool and further having a lower beveled shoulder machined to rest against a bowl-shaped abutment in the tubing head spool to prevent the test plug from descending further into the wellhead stack assembly.

36. (New) The test plug tool as claimed in claim 33 wherein the fluid passage comprises a fluid passage machined through a sidewall of the test plug leg to permit pressurized fluid to flow through a central bore of the test plug hanger and the fluid passageway into an annular space between the test plug leg and the wellhead stack assembly.